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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/997,851	11/29/2001	Yijun Xiong	135778	6747
24587	7590	11/18/2004	EXAMINER	
ALCATEL USA INTELLECTUAL PROPERTY DEPARTMENT 3400 W. PLANO PARKWAY, MS LEGL2 PLANO, TX 75075			LEE, DAVID J	
			ART UNIT	PAPER NUMBER
			2633	

DATE MAILED: 11/18/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/997,851	Applicant(s) XIONG ET AL.	
	Examiner David Lee	Art Unit 2633	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-14 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 29 November 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>10/30/2003</u> . | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Claim Objections

Claims 9-11, 13, and 14 are objected to because of the following informalities: these claims refer to "the method of claim 1". This should be changed to "the method of claim 8." Appropriate correction is required.

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claim 1-3, 6-10, and 13-14 are rejected under 35 U.S.C. 102(b) as being anticipated by Haas (US Patent No. 5,469,284).

Regarding claim 1, Haas teaches circuitry for scheduling data bursts in a optical burst-switched router, comprising: an optical switch for routing optical information from an incoming optical transmission medium to one of a plurality of outgoing optical transmission media (fig. 2 – 18); a delay buffer coupled to the optical switch for providing n different delays for delaying information between the incoming transmission medium and the outgoing transmission media (fig. 2 – 20); scheduling circuitry associated with each outgoing medium, comprising n+1 associative processors (fig. 3 – 32, and col. 3, lines 24-27: although figure 3 shows a delay line for each processor, Haas states in col. 3, lines 24-27 that a straight-path, with no delay, can be provided,

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and therefore, n different delays and $n+1$ associative processors would exist) each associative processor including circuitry for: storing scheduling information for the associated outgoing optical transmission medium relative to a respective one of the n delays and for a zero delay (col. 1, lines 32-37), and identifying available time periods relative to the respective delays in which a data burst may be scheduled (col. 2, lines 44-48: to schedule data bursts so that they do not collide, it is inherent that available time periods to schedule the bursts must be identified).

Regarding claims 2 and 9, Haas teaches the incoming optical transmission medium and the outgoing optical transmission media comprise optical fibers (col. 2, line 60).

Regarding claims 3 and 10, Haas teaches that the associative processors identify unscheduled time periods (col. 2, lines 44-48: to schedule data packets in available time slots in such a way that no two data packets collide, it is inherent that the unscheduled time periods as well as the scheduled time periods must be identified).

Regarding claims 6 and 13, Haas discloses that the delay buffer comprises discrete delay lines each coupled a predetermined input and a predetermined output of said optical switch (fig. 2 – 20).

Regarding claims 7 and 14, Haas discloses a matrix of delay lines (fig. 2 – 20), where a desired delay line can be coupled between a selected input and selected output of said optical switch (fig. 5).

Regarding claim 8, Haas discloses a method of scheduling data bursts in a optical burst-switched router that routes optical information (col. 3, line 50) through an

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optical switch (fig. 2 – 18) from an incoming optical transmission medium to one of a plurality of outgoing optical transmission media either directly through the optical switch or via one of n different delays of a delay buffer (fig. 2 – 20), comprising the steps of; storing scheduling information in n+1 associative processors for the associated outgoing optical transmission medium relative to a respective one of the n delays and for a zero delay (col. 1, lines 32-37, and fig. 3 – 32, and col. 3, lines 24-27: although figure 3 shows a delay line for each processor, Haas states in col. 3, lines 24-27 that a straight-path, with no delay, can be provided, and therefore, n different delays and n+1 associative processors would exist) , and concurrently identifying available time periods in each of said associative processors in which a data burst may be scheduled, such that available time periods associated with multiple delays can be simultaneously determined (col. 2, lines 44-48: to schedule data bursts so that they do not collide, it is inherent that available time periods to schedule the bursts must be identified).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 4, 5, 11, and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Haas (US Patent No. 5,469,284) in view of Tancevski (US Patent No. 6,493,120).

Regarding claims 4 and 11, Haas teaches all the limitations as applied to claims 1 and 8 above except for the limitation that the associative processors identify gaps between scheduled data bursts. Tancevski teaches a processor that identifies gaps between schedule data bursts (col. 1, line 66 to col. 2, line 9). One of ordinary skill in the art at the time of invention would have been motivated to identify gaps between scheduled data bursts because it makes much more efficient use of the channels by identifying and filling in all gaps and unscheduled time, and it prevents data bursts from colliding with each other. Therefore, if not inherent, it would have been obvious to include gap-identifying means as indicated by Tancevski in the associative processors of Haas.

Regarding claim 5, Haas teaches a second set of $n+1$ associative processors, wherein the second set of associative processors identify unscheduled time periods (fig. 3 –32: any combination of the processors 32 can be considered a second set, since each identifies unscheduled time periods, but the set must include the straight-path line without delay, so as to have $n+1$ processors with n delay lines).

Regarding claim 12, Haas teaches identifying unscheduled time periods in each of said associative processors (col. 7, lines 63-65: in order to synchronize and align the incoming data bursts, it is inherent that the unscheduled time periods must be identified so as not to cause collision among the bursts).

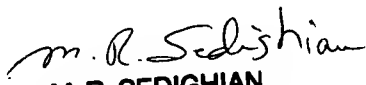
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Any inquiry concerning this communication or earlier communications from the examiner should be directed to David Lee whose telephone number is (571) 272-2220. The examiner can normally be reached on Monday - Friday, 9:00 am - 5:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jason Chan can be reached on (571) 272-3022. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

David Lee


M. R. SEDIGHIAN
PRIMARY EXAMINER